

REMARKS

The Examiner's Action mailed March 17, 2004 has been received and its contents carefully considered.

Claims 1-20 are pending in this application. Claims 1, 7, 8, 14-16 and 18 are amended herein. Amended claims 1, 7, 8, 14, 15 and 18 are independent claims.

The Applicants acknowledge with appreciation the Examiner's early indication that claims 7, 14-16, 18 and 19 would be allowable if rewritten in independent form, including all of the limitations of their respective base claims and any intervening claims. Accordingly, claim 7 is rewritten herein in independent form to include the limitations of claim 1, claims 14 and 15 are rewritten in independent form to include the limitations of claim 8, and claim 18 is rewritten in independent form to include the limitations of claims 8 and 17. Instead of rewriting claim 16 in independent form, the limitations of claim 16 have been incorporated into independent claim 8, and claim 16 amended to depend from claim 15. It is respectfully submitted that as a result of these amendments to claims 7, 8, 14-16 and 18, all of claims 7-20 are now in condition for allowance.

In the Action, the Examiner objects to the title of the invention as not being adequately indicative of the invention to which the claims are directed. The title is amended herein to read "IMAGE FORMING APPARATUS HAVING A GAP BETWEEN TONER-SUPPLYING AND DEVELOPING ROLLERS." The Examiner is respectfully requested to approve the amended title and withdraw the objection.

In the Action, claims 1-3, 5 and 6 are rejected under 35 U.S.C. §102(b) as being anticipated by Ikegawa et al., U.S. Patent No. 4,786,936. In addition, claims 1-6 are rejected under 35 U.S.C. §102(b) as being anticipated by Enoki et al., U.S. Patent No. 4,885,223. Claim 1 is amended herein to more clearly distinguish over the applied prior art references.

The present invention addresses problems associated with a conventional development system in which a toner-supplying roller rotates in contact with a developing roller to charge non-magnetic toner. Such problems include deterioration and agglomeration of the toner and wear of the tone-supplying roller (see, for example, application page 4, lines 2-5).

In the present invention, a developing roller 17 and a developer-supplying roller 46 are separated from each other by a predetermined distance, but cooperate to charge non-magnetic toner between them (see, for example, application Fig. 2). In addition, a limiting member (developing blade 14) is urged against the *developing roller* to form a thin layer of non-magnetic toner on the developing roller. The developing blade 14 also functions to charge the non-magnetic toner deposited on the developing roller triboelectrically. This fact is apparent from the "Description of the Related Art" (application page 1, lines 22-25).

On the other hand, Ikegawa is directed to a developing unit that employs a two-component magnetic developer. The toner is transferred by means of a magnetic carrier. A developing sleeve 4 has a magnetic roller 6 incorporated therein (see, for example, Fig. 1). The developing sleeve 4 and a photosensitive drum 100 are spaced apart a predetermined distance D_s .

A main stirring plate 7 is spaced a predetermined distance D_b from the developing sleeve 4 to form a magnetic brush. This magnetic brush rubs against the surface of the photosensitive drum 100 in a developing region X so as to develop an electrostatic latent image on the surface of the photosensitive drum 100 into a visible image (Column 5, lines 21-29). Ikegawa fails to disclose that any kind of limiting member is urged against the developing roller to form a thin layer of toner on the developing roller, as amended claim 1 requires. In contrast to the present invention, Toner T_o in Ikegawa is triboelectrically charged through its contact with the toner regulating blade 18 (Column 4, lines 47-48). Thus, Ikegawa completely differs from the present invention in developing method and does not address the same problem as the present invention.

Enoki is directed to a developing method that uses magnetic toner, just as in Ikegawa. The present invention uses non-magnetic toner, as recited in claim 1. Thus, Enoki is also clearly distinguishable in developing method from the claimed invention.

For at least the foregoing reasons, it is respectfully submitted that claim 1, as well as claims 5-6, patentably distinguish over the applied prior art references.

In the Action, claim 11 is rejected under 35 U.S.C. §103(a) as being obvious over Enoki in view of Yasuda et al., U.S. Patent No. 4,806,992. It is respectfully submitted

that claim 11 is allowable for at least the reason it depends indirectly from amended claim 8.

Yasuda is directed to a technique in which toner is triboelectrically charged. It is noted that in Yasuda, a developing roller 32 rotates in a direction shown by arrow A and a developer supply roller 34 rotates in contact with the developing roller 32 in a direction opposite to the developing roller 32. Thus, the developing roller 32 and developer supply roller 34 rotate in opposite directions at their circumferential surfaces in contact with each other. Yasuda does not address the problems of the prior art that the present invention is intended to solve, and therefore, fails to cure the earlier discussed deficiency in the base reference, Enoki.


In summary, it is submitted that this application, as amended, is in condition for allowance. Such action and the passing of this case to issue are respectfully requested.

A fee in the amount of \$264.00 is submitted herewith for three (3) excess independent claims added by this Amendment. Should the payment be missing or incorrect in amount, please charge any deficiency or credit any overpayment, as appropriate, to our Deposit Account No. 18-0002 and advise the undersigned accordingly.

Should the Examiner feel that a conference would help to expedite the prosecution of this application, the Examiner is hereby invited to contact the undersigned counsel to arrange for such an interview.

Respectfully submitted,

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Date


Phillip G. Avruck (Reg. No. 46,706)
RABIN & BERDO, P.C.
(Customer No. 23995)
Telephone: (202) 371-8976
Telefax : (202) 408-0924
E-mail : firm@rabinchamp.com

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